

OFFSETS

American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)

Category	HR 2454 (as passed in House 6-26-09)	AB 32, CARB Scoping Plan, and CAR Protocols	California Impacts	ETAAC Issues
ABBREVIATIONS	<p>Title VII, PART D: Offsets</p> <p>PART E: Reduced Deforestation – Int'l</p> <p>TITLE V—Agricultural and Forest domestic offsets et al.</p> <p>NOTE: Some ambiguities in ACES language</p>	<p>SP = Scoping Plan for AB 32</p> <p>WCI = Western Climate Initiative: CA is member state</p> <p>CAR = Climate Action Reserve: National offset Registry</p> <p>CRTs=Climate Reserve Tonnes= carbon offset credits</p> <p>MOU = Governors' Sub-national MOU for International Offsets</p>		
OFFSET QUANTITY: SYSTEM				
<p>QUANTITY AUTHORIZED</p> <p>§722 (d)</p>	<p>2 billion tons of offsets allowed annually:</p> <p>Domestic: 1 Billion Mt CO₂e/yr</p> <p>Internat'l: 1 Billion Mt CO₂e/yr</p> <p>-EPA Administrator can increase Int'l offsets to 1.5 BMt if available domestic offsets less than 0.9 billion tons at prices generally equal to or less than emission allowance prices (C)</p> <p>Total offsets may be increased or decreased by Presidential recommendation to Congress</p>	<p>SP: Offsets in Scoping Plan pegged to WCI market design:</p> <p>=49% of total allowances authorized from 2012-2020 under declining program cap</p> <p>SP: "...While some offsets provide benefits, allowing unlimited offsets would reduce the amount of reductions of greenhouse gas emissions occurring within the sectors covered by the cap-and-trade program (p.37)</p> <p>"... (The WCI) limit will help provide balance between the need to achieve meaningful emissions reductions from capped sources with the need to provide sources within capped sectors the opportunity for low-cost reduction opportunities that offsets can provide."</p>	<p>Offsets offer low-cost compliance option and have strong impact on cost containment for CA emission sectors.</p> <p>EIA analysis of ACES (8/09) also indicates: "... compliance with emissions caps that is generated through offsets could exceed actual reductions in covered emissions.."</p> <p>Uncertain availability and quality of offsets, esp. in early years:</p> <p>-CBO (6/09) estimates US demand at:</p> <p>Domestic offsets:</p> <p>~230M allowances 2012</p> <p>~300M allowances 2020</p> <p>International offsets:</p> <p>~190M allowances 2012</p> <p>~340M allowances 2020.</p> <p>In contrast: over 4 years CDM has delivered a total of ~277 MMt</p> <p>-Int'l Forest Sector will not likely be prepared to issue credits in quantities req'd by 2012. Possible EUETS and probable Australia et al. competition for limited supply.</p>	

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OFFSET QUANTITY: ENTITY				
ENTITY OFFSET LIMIT \$722	<p>Covered entities collectively may use offset credits up to a maximum of 2 billion tons/yr</p> <p>Demonstrating compliance using offset credits: Pre-2018: 1 domestic credit =1 int'l credit. Post-2018: 1 domestic credit = 1.25 int'l credit.</p> <p>-Pro rata share of 2 B tons: Percentage of allowances to be held to demonstrate compliance for given calendar year determined by “dividing 2 billion by the sum of 2 billion plus the number of emission allowances for the previous year, and multiplying by 100”</p> <p>-<i>This calculates to:</i> 30% in 2012; 30% in 2020; 35% in 2030; 45% in 2040; 66% in 2050</p> <p>- Not more than 1/2 may be domestic and 1/2 internat'l offsets, except as modified by EPA Administrator 722(d)(1)(B)</p> <p><u>Term Offset Credits:</u> Entity may use term credits instead of domestic offset credits to temporarily demonstrate compliance. - Combined quantity of term and domestic credits shall not exceed quantity of domestic credits entitled for the year.</p> <p>-Financial Assurance req'd: Entity using term offset credits must provide financial assurance that entity will have sufficient</p>	<p>SP: pegged to WCI limits</p> <p><u>Offset limit per entity/yr:</u> approx. = <5% per entity, based on WCI market design and estimate of number of emitters and allowances</p>	<p>Lower access to offsets raises cost of compliance for CA emission sectors, but may drive more reductions in covered emissions.</p>	

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	resources to obtain allowances or credits necessary to demonstrate final compliance. EPA Admin. to issue regulations.			
OFFSETS: DOMESTIC				
PRE-EXISTING OFFSET PROGRAMS: Grandfathering				
RECOGNITION OF EARLY ACTION PROGRAM §740, 734	<p><i>Note: Some unclear language in ACES</i> <u>Conditions for approval of Pre-existing programs:</u> -Program estab'd by law or regulation prior to Jan. 1, 2009; or program meets same criteria. <u>Program criteria:</u> Program has: -developed offset project standards, methodologies and protocols through public consultation process or peer review process -made publicly available standards, methodologies and protocols requiring that credited reductions are permanent, additional, verifiable and enforceable -required verification by State or tribal agency or accredited 3rd party verification body -no conflict of interest for entities administering the program</p> <p><u>Other programs:</u> EPA Administrator "... shall approve any such program that Administrator determines has criteria and methodologies of at least equal stringency... (740 (e)(2)). Administrator may approve types of offsets from approved programs -Administrator to give due consideration to</p>	<p>CA Grandfathering obligations: AB 32: "Ensure that entities that have voluntarily reduced GHGs prior to (...Jan.1,2011) receive appropriate credit for early voluntary reductions" (HSC 38562(b)(3))</p> <p>CCAR 2001: "... CA to offer .. best efforts to ensure that CA Registry members receive appropriate consideration for early actions in light of future state, federal or international GHG regulatory programs".</p> <p>AB 32: For a CA state market, formal ARB recognition needed: "Offsets used to meet regulatory requirements must be quantified according to Board-adopted methodologies, and ARB must adopt a regulation to verify and enforce the reductions (HSC §38571).</p>	<p>POSITIVE: CAR appears to meet all ACES tests for a pre-existing program.</p> <p>-ARB has designated certain CAR Protocols as "Discrete Early Action for Vol. Market" under AB32</p> <p>-Unclear whether other early action programs (e.g. CCX, Am.C.Registry, VCS) will be grand-fathered under "equal stringency" test or other</p>	SEE SUMMARY TABLE OF KEY POINTS

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	existing methodologies for offset projects.			
EXCHANGE VALUE FOR EARLY ACTION CREDITS §782 (t), 795	<p><i>Note: Some unclear language in ACES</i></p> <p><u>Exchange value for Offsets:</u> Early Action Credits issued from 2009–2012: can be exchanged 1:1 for Offset Credits and used for compliance purposes</p> <p>Early Action Credits issued from 2001–2008: Receive emission allowances in an amount equal to the average value of the credits from 2006–2009 795 (a)(1)</p> <p>1 percent of emission allowances is allocated for exchange of early action credits (in 2012). Exchange must occur within 3 years of enactment or regulations.</p>		<p>POSITIVE: ACES appears to honor full exchange value for CAR CRTs: CRTs issued from 2009–2012 can be exchanged 1:1 for Offset Credits and be used for compliance purposes</p> <p>CRTs issued from 2001–2008: will receive emission allowances in an amount equal to the average value of the credits from 2006–2009 795 (a)(1)</p> <p>Clarity needed: to ensure term “average value” applies to average credits within a specific offset and program type, not across programs of different rigor. e.g. Avoid possible interpretation: CAR CRT ~\$10/ton vs. CCX ≤\$1-2/ton =avg. ~\$5 if req'd to mix together in a basket of "early action offsets", potentially diminishing CRT value.</p>	
OFFSET ADMINISTRATION and ADVICE				
AGENCY JURISDICTION	<p>Two offset programs established:</p> <p>EPA: Title VII: GHG Emission Reductions (Domestic Non-forestry and Agricultural offsets; International offsets including forestry)</p> <p>USDA: Title V: Domestic Agriculture and Forestry Offsets</p>	<p>CAR is single agency</p> <p>Ensures common approach and rigor for all offset protocols and procedures.</p> <p>CAR = “Nat'l non-profit entity to ensure integrity, transparency and financial value of offsets in U.S. carbon market”.</p> <p>Has established reputation for regulatory-quality standards.</p>	<p>Conflicting protocols bet. CAR and 2 federal agencies can destabilize offset integrity and marketability</p> <p>Uncertain offset quality from non-parallel standards and procedures for EPA and USDA</p>	SEE SUMMARY TABLE OF KEY POINTS

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EPA: OFFSET REGISTRY §732	EPA Administrator shall establish an Offset Registry	CAR already operates highly-respected offset Reserve (i.e. registry) with North American scope - Tracks and retires credit transactions by serial number and vintage in publicly-accessible system -Ensures reductions are real, permanent, additional, verifiable, enforceable, address leakage and other program elements.	FEDERAL OFFSET REGISTRY will pre-empt existing voluntary registries and become the national compliance Registry for offsets ACES should provide for a transition period post-2012 to accommodate transition of CAR members to federal system and to integrate protocols. CAR to remain as test center for new protocol development and possible continuation of voluntary market.	
EPA ADMINISTERED OFFSETS (Non-domestic forestry and agriculture)				
EPA: AUTHORITY of EPA ADMINISTRATOR §731, 732	<i>Within 30 days:</i> - Establish Offsets Integrity Advisory Board <i>Within 2 years:</i> - Establish program for issuing offset credits -Consult with appropriate Federal agencies; consider recommendations of advisory Board -Periodically revise regs. as necessary.			
EPA: "Offsets Integrity Advisory Board" §731	- Board advises on project types, methodologies, scientific uncertainty for all offset types <i>except agriculture and forestry</i> - 9 Members appointed by EPA Administrator - "...qualified by education, training, and experience to evaluate scientific and technical information..." - <i>Report:</i> By 2017 and every 5 yrs., scientific review of offset and int'l deforestation reduction programs.	Similar function provided by CAR: scientific and technical input, public process with stakeholders CAR review process addresses project types, methodologies and scientific analysis CAR is non-profit entity with Board of Directors, currently chaired by Sect'y CalEPA.		

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EPA: LIST OF ELIGIBLE OFFSET PROJECT TYPES (non-Agriculture and Forestry) 733	<p><i>Within 1 yr.</i> EPA to:</p> <ul style="list-style-type: none"> - Establish initial list of eligible project types including international offsets - Give priority to Adv. Bd. recommendations and justify discrepancies <p><i>Within 2 yrs:</i> Establish additional list of offset project types.</p> <p>Modification of eligible projects:</p> <ul style="list-style-type: none"> -Administrator may add or remove project types from the initial list through rule after consultation with Fed. Agencies and Advisory Bd. -Modifications may be proposed by Advisory Bd., Administrator and any person per a petition process 	<p>Eligible Project Types CAR: Open nomination process for project types. Protocols adopted through stakeholder participation, technical and scientific review.</p> <p>Adopted Protocols: Forestry; Urban Forestry; Landfill methane: US; Mexico; Livestock methane: US; Mexico.</p> <p>Protocols in Process -Organic Waste Digestion; (consider adding composting) -Coal Mine Methane -Ozone Depleting Substances -N2O from Nitric Acid Plants</p> <p>Promising: -Boiler Efficiency Improvements</p> <p>Protocols not suitable or better met w/ regulatn or incentives: Short term agriculture Bus Fleet Upgrades Bus Rapid Transit</p> <p>Limited US Application: Blended Cement Production</p> <p>Further data needed: Soil sequestration; wetland restoration;</p> <p>Under Study: Truck Stop Electrification</p>	<p>Uncertainty for CA: Different protocols, standards and procedures under federal pre-emption</p> <p>Non-parallel federal standards and process for identifying offset project types will affect offset integrity and cap:</p> <p>EPA: -- Eligible project types to be identified based on scientific and technical advice -Administrator may add or remove from list</p> <p>USDA: -Project list specified in legislation Sect'y may revise but not remove from list</p>	SEE SUMMARY TABLE OF KEY POINTS
EPA: METHODOLOGY and CRITERIA FOR OFFSET CREDITS 733; 734	<p>Administrator to establish methodologies for each project type</p> <ul style="list-style-type: none"> - Additionality: not begun before Jan.1,2009 <i>except earlier</i> if activity readily reversible; - Required: Activity Baseline, Quantification Methods, Leakage, Permanent 	<p>SP: "... offsets will be subject to stringent criteria and verification procedures to ensure their enforceability and consistency with AB 32 requirements." (p.30)</p> <p>SP: Criteria for offsets: Real, additional, quantifiable, permanent, verifiable, enforceable</p>	<p>CAR Protocols provide explicit criteria and methodologies</p> <p>CAR CRTs have highest market value on Vol. Market due to high standards</p>	

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	<p>Offset credits issued to projects that</p> <ul style="list-style-type: none"> -result in reductions or avoidance of emissions, or sequestration of GHGs; - Credits to be verifiable and additional <p>-Offset credits for sequestration to be permanent.</p> <p>Includes destruction of methane, chlorofluorocarbons or other ozone depleting substances, if permitted by Administrator</p>	<p>CAR: Protocol standards are explicit for each project type:</p> <p>Real, additional, permanent, verifiable, enforceable, address leakage etc.</p>		
<p>EPA: CREDITING PERIOD</p> <p>734 c(2)</p>	<p>Crediting period:</p> <ul style="list-style-type: none"> - No less than 5 yrs - No greater than 10 years for any project type other than those involving sequestration. <p>See: 20 yr for forestry projects(USDA 504)</p> <p>Project Renewal: Can petition for new crediting period subject to new methodologies and project type.</p> <p>Administrator:</p> <ul style="list-style-type: none"> - may limit number of new crediting periods -to apply conservative assumptions to maximize certainty that environmental integrity of cap is not compromised. 	<p>CAR:</p> <p>Methane Crediting Period = 10 yr. since offset for the emitted ton is immediate</p> <p>Renewal: Review required at end of project to determine if project still has Regulatory additionality</p> <p>Forestry = 100 yr crediting period to restrict re-emission of C to atmosphere</p>	<p>CAR Comparable concepts for non-forest and ag offsets but different for forest and ag (see: USDA)</p> <p>CAR protocols more explicit and stringent</p>	
<p>EPA: PERMANENCE</p> <p>734</p>	<p>Permanence:</p> <p>“...any sequestration with respect to which an offset credit is issued under this part results in a permanent net increase in sequestration...”</p>	<p>CAR sets Permanence standard based on IPCC guidance of 100 yrs. as the life cycle of an emitted ton of CO2 in the atmosphere.</p>	<p>CAR offsets from reversible project types (ag, forests) have higher integrity and rigor, since are based on explicit 100 year permanence standard.</p>	<p>SEE SUMMARY TABLE OF KEY POINTS</p>

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	<p>ACES is silent on the length of time that an emitted ton must be offset for.</p> <p>Crediting periods do not equate to permanence, since Reversible Offset types (ag, forestry) may re-emit carbon to atmosphere at end of the crediting term.</p>	<p>SEE also: USDA re: Ag and Forest project types; term crediting</p>	<p>Greater CAR quality should be reflected in higher exchange value or price.</p>	
EPA: OFFSET RESERVE 734 (3)	<p>Administrator to subtract and reserve quantity of offset credits based on risk of reversal.</p> <p>Reserved credits held by Administrator and registered in Offset Registry.</p> <p>Other insurance methods authorized.</p>	<p>CAR: Comparable requirements for Buffer Reserve of CRTs required from project developer. Quantity based on risk of reversal.</p>	<p>CAR Comparable concepts based on risk of reversal</p>	
EPA: ACCOUNTING FOR REVERSALS 734 (b)	<p>Reversals must be reported</p> <p>Intentional reversal: 1:1 Restore to reserve, credits or allowances equal to number cancelled.</p> <p>Unintentional reversal: ½: 1 Restore to reserve, credits or allowances equal to one-half number of credits reserved or cancelled, whichever is less.</p>	<p>CAR:</p> <p>Voluntary Reversal: Compensation based on age of project, e.g. Forest Mgmt Vers. 3.0: 0-5 yrs =1.40 >50yrs =1.00</p> <p>Unavoidable Reversal: Covered by req'd Buffer Pool credits</p>	<p>CAR reversal standard more stringent</p> <p>Additional measures req'd beyond 1:1 replacement for reversals e.g. PIA= Permanence Implementation Agreement</p>	
EPA: VERIFICATION OF OFFSET PROJECTS 736	<p>Project developer to submit report by accredited third-party</p> <p>Include: quantity of GHGs reduced; methodologies; certification that project meets requirements; compliance with conflict of interest requirements</p>	<p>CAR Verification standards exceed ANSI ISO 14065 by requiring:</p> <ul style="list-style-type: none"> -CA specific training -Compliance with CA Verification Protocols -Annual site visit -Right for CAR to request independent observation visits 	<p>CAR exceeds ANSI stds. for Verification</p>	
EPA: VERIFIER ACCREDITATION 736	<p>Administrator to accredit third-party verifiers as professionally qualified; no conflicts of interest.</p> <p>Administrator may accredit:</p>	<p>CAR has requirements additional to ISO 14065</p> <p>- CAR-specified training and accreditation</p>	<p>CAR exceeds ANSI stds. for Verification Bodies</p>	

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	-ANSI (American Nat'l Stds. Institute) -Separate EPA Accreditation process			
USDA ADMINISTERED OFFSETS: Domestic Agriculture and Forestry				
USDA: UNCAPPED SECTORS 501	Forestry and Agriculture explicitly excepted from definition of "capped sector"	SP, WRI, CAR: Comparable exception	Suggestions to place agriculture and forestry under a cap are not currently accepted by any domestic or int'l body	
USDA: SECRETARY DUTIES 502, 503	<i>Within 30 days :</i> Establish Advisory Committee <i>Within 1 yr:</i> --Establish offset credit program for domestic agriculture and forestry sources. -Establish methodologies for each practice type in 503	CAR: All offset types held to same rigor. Domestic agriculture and forestry offsets not under separate jurisdiction.	Potential for conflicting standards and quality of offsets bet. EPA and USDA Standards for EPA and USDA differ re: authority of Secretary and Administrator; presumptive eligibility of offset project types; offset standards and rigor; public procedures	
USDA: OFFSET CREDIT PROGRAM	Sect'y USDA to establish by rule: -Methodologies for quantifying GHG benefits; activity baselines and additionality; leakage; reversals; third-party verification; technical assistance to offset project developers using Conservation Operations account; approval of offset project plans; -Certificat'n; reporting and record keeping; audits.	SP: References Offset standards of WCI WCI: Member states to adopt standards equal to or more stringent than WCI	Uncertainty: Process and standards for agriculture and forestry offsets are delegated to future rulemaking by USDA <i>except for</i> specified list of offset project types.	
USDA: ADVISORY COMMITTEE	Comparable to EPA " Offsets Integrity Advisory Board " -Provides sci. and tech. advice to Sect'y on	CAR: single agency provides function (see EPA 731 above)		

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" <i>Greenhouse Gas Emission Reduction and Sequestration Advisory Committee</i> " §531	domestic agriculture and forestry offsets -9 members "...qualified by education, training, and experience to evaluate scientific and technical information..." - 3 year terms except for initial 5 yr. stagger. May reappoint once for 3-yrs; directly after first term. <i>Report: Scientific review of offset program by 2017 and at 5-year intervals</i>			
USDA: LIST OF SPECIFIED OFFSET PRACTICE TYPES: 503 (b) 1) Domestic Agriculture	<i>Unclear: if USDA list of project types is eligible "per se", or if the list is illustrative, per "...such as"</i> <i>"At a minimum, the list ... shall include those practices that avoid or reduce greenhouse gas emissions or sequester greenhouse gases, such as":</i> AGRICULTURE: Agricultural, grassland, and rangeland sequestration and management practices: -Altered tillage practices; -winter cover cropping, continuous cropping, other means to increase biomass returned to soil in lieu of planting followed by fallowing; -reduction of nitrogen fertilizer use or increase in nitrogen use efficiency; -reduction in frequency and duration of flooding of rice paddies; -reduction in C emissions from organic soils; - reduction in GHG emissions from manure and effluent;	CAR recognizes few agricultural offset project types due to short-term C gains and quick reversals <i>(See list of adopted CA Protocols under EPA 733)</i> Agricultural activities considered by CAR but not adopted: - <i>Soil Sequestration for Range and Cropland:</i> issues of permanence; awaiting further research. - <i>Tidal Wetland Restoration:</i> awaiting further science for quantification	Concern for quality and permanence : Most Agricultural offset activities are - short-term C storage - easily reversible - difficult to quantify and verify <i>A priori</i> designation of ag offsets in legislation assumes they have scientific and technical validity Difficult to remove USDA project types even if do not meet credible offset standards.	SEE SUMMARY TABLE OF KEY POINTS

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	-reduction in GHGs due to changes in animal management practices, including dietary modifications			
USDA: 2) Domestic Forestry 503	FORESTRY AND LAND USE CHANGE: Afforestation; reforestation; forest management resulting in an increase in forest carbon stores including but not limited to harvested wood products; management of peatland or wetland; conservation of grassland and forested land; improved forest management, including accounting for carbon stored in wood products; reduced deforestation or avoided forest conversion; urban tree-planting and maintenance; agroforestry; adaptation of plant traits or new technologies that increase sequestration by forests;	CAR Forestry Protocols project types include: -Reforestation -Forest Management -Avoided Conversion -Urban Forestry Forest activities considered but not adopted: -Afforestation -Agroforestry -Conservation of grassland -Adaptation of plant traits or genetic modifications to increase rate of sequestration -CAR specifically excludes projects that employ broadcast fertilizers	Concern for quality: Federal list includes practices not accepted by California due to environmental impacts or lack of durable C storage	SEE SUMMARY TABLE OF KEY POINTS
USDA: 3) Manure Management and Disposal	Eligible activities include: -waste aeration; -biogas capture and combustion; and - application to fields as a substitute for commercial fertilizer.	CAR: comparable protocols for Methane only; not NOx -Livestock: US -Livestock: Mexico	Comparable for methane capture and destruction	
USDA: MODIFICATION of ELIGIBLE PROJECT LIST 503 (c)	List of eligible offset project types is specified in ACES Sect'y may "add to or revise", but not remove projects types from list (unlike EPA)	CAR: Eligible project types identified through public process, w/ scientific and tech review and stakeholder participation	Uncertain quality and equivalence with CAR CRTs	

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USDA & EPA: PERMANENCE 734	<p>Permanence: “...any sequestration with respect to which an offset credit is issued under this part results in a permanent net increase in sequestration...”</p> <p>ACES is silent on the length of time that an emitted ton must be offset for.</p> <p>Crediting periods do not equate to permanence, since Reversible Offset types (ag, forestry) may re-emit carbon to atmosphere at end of the crediting term.</p>	<p>CAR sets Permanence standard based on IPCC guidance of 100 yrs. as the life cycle of an emitted ton of CO2 in the atmosphere.</p>	<p>CAR offsets from reversible project types have highest integrity and rigor since are based on explicit 100 year permanence standard.</p> <p>Higher CAR quality should be reflected in higher exchange value or price.</p>	SEE SUMMARY TABLE OF KEY POINTS
USDA: CREDITING, and TERM OFFSET CREDITS 504 (d), 507, 722 (see also EPA 734 (c) (2))	<p>FULL OFFSET CREDIT: Crediting period to have a term up to =5 years for agricultural sequestration practices; =20 years for forestry sequestration practices; and =10 years for other practice</p> <p>Implication from ACES: 1 ton from 20 year Forest project/yr = 1 offset credit/yr = full compliance with offset obligation/yr.</p> <p>But unspecified: For how many years must an emitted ton be offset by a reversible project type?</p>	<p>CAR does not recognize Term Offset Credits</p> <p>CRTs are full credits</p> <p>Unlike Term Credit approach of CDM (tCERs), governance for US forest projects is not an issue given enforceability of reversal and penalty provisions</p> <p>C can be re-emitted at end of term.</p>	<p>Issue of quality and market acceptance of Term Credits:</p> <ul style="list-style-type: none"> -Short-term projects are low bar for offset quality, price and carbon management opportunities -Administrative complexity for buyer leads to low acceptance. Term Credits under CDM (5 yr tCERs) have attracted few buyers on int'l market <p>-Buyer left with uncertain offset obligation without definition for “...quantity of allowances of credits necessary to demonstrate final compliance”</p>	

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	<p>TERM CREDIT: Term Credits apply only to projects of 5 years (per 504(d)) USDA Secretary to issue term offset credits, in lieu of an offset credit, for each ton CO₂e that has been sequestered.</p> <p>Financial assurance: Covered entity cannot use Term Credit for compliances purposes unless it “...simultaneously provides to the Administrator financial assurance that, at the end of the term offset credit's crediting term, the covered entity will have sufficient resources to obtain the quantity of allowances or credits necessary to demonstrate final compliance “722(d)(2)(E)</p>		i.e. no indication that five, 20 yr. serial forest projects (or equivalent) wd be req'd. to attain a 100-yr offset standard for an emitted ton.	
USDA: OFFSETS RESERVE and ACCOUNTING FOR REVERSALS	<p>Silent for USDA: Delegated to rulemaking</p> <p>Explicit for EPA</p>	<p>CAR Forest Protocols (3.0)</p> <ul style="list-style-type: none"> -Lower risk rating assigned if Conservation Easement is placed on property. -Permanence Implementation Agreement (PIA) req'd. -Reversals must be reported and quantified. -If reversal occurs, restitution of equivalent tons from Buffer Reserve required 	<p>Uncertainty: Different standards bet. USDA, EPA and CAR</p>	
USDA: FULL SECTOR ACCOUNTING: Forest Emissions from conversion and loss	<p>ACES credits forest sinks from projects but does not correlate with emissions from forest sector as a whole</p> <ul style="list-style-type: none"> - Loss of private forestland will emit 30 billion tons of CO₂ by 2050 but projected forest emissions are not explicit in calculating the cap. 	<p>CA Scoping Plan requires accounting for forest sector as a whole to track forest emissions as well as gains.</p>	<p>Include in Reporting requirements for USDA and EPA the tracking of sector-wide forest and agriculture emissions. This will better inform leakage calculations and progress towards the cap.</p>	SEE SUMMARY TABLE OF KEY POINTS
INTERNATIONAL OFFSET CREDITS – Non-Forestry				
<i>Int'l</i> : AUTHORITY	EPA Administrator in consultation with Sect'y State and USAID may issue	SP: For purpose of encouraging early action toward binding commitments,	POSITIVE: Benefits CA market to have access to high-quality international offsets	SEE SUMMARY

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743	international offset credits. Regulations to be developed within 2 yrs of enactment. Int'l offset credits shall not be issued for destruction of hydrofluorocarbons (743(h))	and reducing concerns about competitiveness and C leakage: ARB to consider limiting offsets from developing world to those that demonstrate performance in: - C intensive sectors (e.g., cement) - Forestry : eligible forest C activities in accordance with national or sub-national accounting frameworks. Governors' MOU : Agreement to work jointly to develop minimum performance standards or sectoral benchmarks, backed by monitoring and accounting.	that meet strong performance standards: -CA participation contributes to quality of int'l offset and builds confidence of CA buyers and public	TABLE OF KEY POINTS
<i>Int'l</i> : ELIGIBLE COUNTRIES	Int'l offset credits recognized only if - US has bilateral or multilateral agreement with the country -Country is a developing country	SP and Governor's MOU : CA to preferentially accept credits from signators of sub-national MOU	MOU adds "confidence building" tier of additional offset review	
<i>Int'l</i> : SECTOR-BASED CREDITS (e.g. concrete, steel; non-forestry) 743	Sector crediting to minimize leakage and encourage national mitigation actions. Applies to Countries : - with comparatively high GHG emissions or greater levels of economic development -that, if located in US, would be within a sector subject to compliance (722) (e.g. cement, steel,) - products sold in internationally competitive markets Sectoral Offset Credits issued for GHG reductions relative to domestically enforceable baseline of absolute emissions, established in a bilateral or multilateral agreement for the sector	MOU : Implementation under development	CA benefits: International Sector crediting will capture leakage	

OFFSETS

American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)

Category	HR 2454 (as passed in House 6-26-09)	AB 32, CARB Scoping Plan, and CAR Protocols	California Impacts	ETAAC Issues
INTERNATIONAL OFFSET CREDITS – FORESTRY				
OFFSETS FROM REDUCED DEFORESTATION 743 (e)	<p><i>Largely patterned after international REDD discussions (Reduced Emissions from Deforestation and Degradation)</i></p> <p>National Baseline: Considers: - average annual historical deforestation rates during at least 5 years; -drivers of deforestation and other factors to ensure additionality -Establishes trajectory to zero net deforestation by not later than 20 yrs. after nat'l baseline estab'd</p> <p>Offset quantity determined by comparing nat'l emissions from deforestation relative to national deforestation baseline established by agreement</p> <p>Offset Activity must be designed and managed to provide: -sustainable forest mgmt. -native forest species and ecosystems -give due regard to rights and interests of local communities, indigenous peoples -in consultation with stakeholders -equitable distribution of profits</p> <p>Degradation and soil carbon from peatlands and wetlands may be included within meaning of deforestation 743 (e)(7)</p>	<p>ACES International program is relevant to further development of Governors' MOU</p> <p>SP: California <i>tracks Forest Sector</i> as a whole to monitor compliance with 5 MMt no-net-loss 2020 target in Scoping Plan.</p> <p>-Advisory Committee IFWG: "Interagency Forest Working Group"</p> <p>CAR operates <i>Project</i> offset crediting, not sector crediting. Applies discount for leakage based on scale of risk.</p>		SEE SUMMARY TABLE OF KEY POINTS
743 (e) (2) ELIGIBLE COUNTRIES	<p>Forest Sector Offset provisions limited to Developing countries with: -Bi- or multilateral agreement with US and</p>	<p>MOU: Suggests preferential position in CA GHG trading market to MOU signators</p>		

OFFSETS**American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)**

Category	HR 2454 (as passed in House 6-26-09)	AB 32, CARB Scoping Plan, and CAR Protocols	California Impacts	ETAAC Issues
	<ul style="list-style-type: none"> -Capacity to <i>monitor, measure, verify</i> forest C fluxes -<i>Institutional capacity</i> to reduce deforestation including forest governance and mechanism to distribute resources -<i>Land use or forest sector plan</i> that assesses drivers of deforestation; identifies improvements necessary to implement national program; establishes timeline for implementation 			
Int'l: STATE- or PROVINCE- LEVEL ACTIVITIES 743 (5)	<p>Forest Sector Offset crediting for sub-national entities comparable to national reqmts: <i>Within 2 yrs:</i> EPA Administrator/ Sect'y State/ USAID to establish list of states or provinces which are major emitters from tropical deforestation -meets criteria of 743(e)(2)and(3) above</p> <p>State or Province Deforestation Baseline: -consistent with nat'l baseline -considers historical deforestation rates during at least 5 year period -considers drivers of deforestation and other factors to ensure additionality -established trajectory that would result in zero net deforestation within 20 yrs -designed to account for leakage outside the state or province.</p> <p>Offset Credits determined by comparing deforestation emissions from state or province relative to state baseline established through bi/multilateral</p>	<p>GOVERNORS' MOU: Addresses sub-national entities</p> <p>-Requires state or province performance above a sub-national baseline</p>	<p>EPA criteria for State and Province-level activities are immediately applicable to CA implementation decisions for Governor's MOU with partner states</p>	

OFFSETS**American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)**

Category	HR 2454 (as passed in House 6-26-09)	AB 32, CARB Scoping Plan, and CAR Protocols	California Impacts	ETAAC Issues
	agreement			
LOW-EMITTING FORESTED COUNTRIES: Project Offsets 743 (e) (6)	<p>Forest Project Offset crediting from eligible countries: (i.e. not sector crediting)</p> <p>-Eligible Countries account for <1% of global GHG emissions and <3% global forest sector and land use change GHG emissions</p> <p>-Make good faith effort to develop forest sector strategic plan</p> <p>Authorizes offset credits from Project-level activities that are adjusted for leakage</p> <p>Phase-Out: No further offset credits for projects after 5 years; but may extend addtn'l 8 yrs. per reqm'ts</p>	<p>No separate consideration for low vs. high emitting countries</p> <p>MOU partners to date are high emitting for relevant sectors: <i>Forestry</i>: Indonesian provinces; Brazilian states; <i>Cement</i>: China provinces</p> <p>No Phase-out</p>		
ALLOWANCE ALLOCATION for INTERNATIONAL REDUCED DEFORESTATION Title VII Part E: 754, 753,781; Part A 704				
SUPPLEMENTAL EMISSIONS REDUCTIONS THROUGH REDUCED DEFORESTATION Part E §753, 704	<p>Allocation (not offset) program to achieve supplemental emissions reductions of at least</p> <p>= 720 MMt CO₂e in 2020</p> <p>= 6 BMt CO₂e by 2025, plus subseq't yrs.</p> <p>In 2020, to provide 10% additional GHG reductions from 2005.</p> <p>-Build capacity to reduce deforestation in developing countries</p> <p>-Preserve existing forest carbon stocks esp. in countries with largely intact native forests</p>	<p>Program relevant to further development of Governors' MOU</p> <p>-potential cooperation bet. CA and partner signators on supplemental USAID programs</p>	All relevant to CA implementation of Governors' MOU	
ALLOWANCE ALLOCATION (for	<p><u>% Emission Allowances for Distribution (781(a))</u></p> <p>2012-2025 = 5%; 2026-2030 = 3%;</p>		"	

OFFSETS**American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)**

Category	HR 2454 (as passed in House 6-26-09)	AB 32, CARB Scoping Plan, and CAR Protocols	California Impacts	ETAAC Issues
international forestry, Part E) Part H §754, 781	2031-2050 = 2% Administrator may adjust annually; carryover permitted -Not authorized as Offsets (781) EPA Administrator to distribute emission allowances to eligible countries <i>or to International Funds</i> with concurrence of Sect'y of State 754 (a) Allowances provided for 5 years, with discretionary 5 year extension if country making progress and leakage discounted 754(g)			
AUTHORITY 754 (b) (2)(b)	USAID has primary responsibility to select activities in consultation with EPA Administrator		"	
AUTHORIZED ACTIVITIES 754	Capacity building to reduce deforestation, incl'd'g: -sub-national pilot programs -develop national baselines -develop measurement, monitoring; leakage prevention; governance; enforcement; policy reform incentives; evaluation		"	
REGISTRY OF SUPPLEMENTAL EMISSIONS REDUCTIONS §754(f)	Administrator shall establish publicly accessible Registry of emissions reductions achieved through program, including discounting for uncertainty			
ADDITIONAL ELEMENTS				
STRATEGIC ALLOWANCE	- initially stocked with allowances withheld from cap and made available at auction if allowance price exceeds 160% of three-			

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Category	HR 2454 (as passed in House 6-26-09)	AB 32, CARB Scoping Plan, and CAR Protocols	California Impacts	ETAAC Issues
RESERVE §726(g),(h)	year average. -Auction proceeds used to buy international offset credits from reduced deforestation to help refill reserve -Intn'l offset credits retired and exchanged for emission allowances at 80% .			

CITATIONS

EIA, 2009. "Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009, August 2009". Energy Information Administration Office of Integrated Analysis and Forecasting U.S. Department of Energy Washington, DC 20585 SR/OIAF/2009-05. Available at: <http://www.eia.doe.gov/oiaf/servicerpt/hr2454/index.html>

CBO, 2009. Congressional Budget Office Cost Estimate. June 5, 2009. H.R. 2454 as ordered reported by the House Committee on Energy and Commerce on May 21, 2009. Available at: <http://www.cbo.gov/ftpdocs/102xx/doc10262/hr2454.pdf>